Panhandle Health District Aquifer Protection

Issue 1

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PHD Aquifer Protection History

In 2009, the Aquifer Protection District Policy and Budget Advisory Committee recommended, and the County Commissioners approved, PHD funding of $349,550. For the first time staffing necessary to visit all facilities governed by the rule at least every two years was funded.

Since the mid-1970s, Panhandle Health District has implemented programs to protect the Aquifer.

Originally, an Interstate Aquifer Study, authorized by Section 208 of the Federal Clean Water Act, funded the PHD program. An outcome of this funding was research and development of PHD's first Aquifer protection rule: one "Equivalent Residence" (250 gpd) of sewage to be disposed of into the Aquifer per a five-acre unit of land.

In 1988, Congressman Tom Foley secured Federal Wellhead Protection Demonstration Project Funds for both Idaho and Washington to develop a more comprehensive program.

One result was adoption of PHD's Critical Materials Regulation in 1990. PHD received about $250,000 per year from the demonstration project funds until 1996-1997. That year the Rathdrum Prairie Aquifer Advisory Committee was formed to develop program and funding recommendations for the future of Aquifer protection programs.

The advisory committee recommended a comprehensive protection program. However, due to lack of funding, staffing for the program was significantly reduced and never allowed full implementation of the Critical Materials Regulation.

From 1998 through 2004, the Idaho Legislature provided partial funding through various appropriations, ranging from $90,000 to $98,000 per year. PHD also adopted some fees and used money from its general fund to keep the protection program going.

In 2005, the Legislature provided $90,800--the final one-time funding--and asked for a local funding proposal to be developed. The Aquifer Protection District Steering Committee was formed to pursue this task. The result was the Legislature's approval of Idaho Code 39-501, which enabled the formation of the current Aquifer Protection District.

To be fiscally responsible, the Aquifer Protection District had to manage three related issues before it could fully fund the PHD aquifer protection efforts: the previous debt with which the program started; a delay between fee collection and disbursement; and the positive balance the APD required maintained in the account.

Program Facts

2008: 17.0 million

2009: 17.8 million

Gallons of chemicals over aquifer that PHD assures are properly managed

2008: 49

2009: 31

New businesses PHD reviewed over aquifer

2008: 950

2009: 828

Number of active businesses PHD assists with chemical and wastewater management

2008: 450

2009: 584

Total PHD visits to businesses

Aquifer Protection District

Panhandle Health District

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Public Health

An Ounce of Prevention

"We don't want businesses to close down because they made mistakes. Prevention work up front may save major expenses down the road."

---Dick Martindale, Program mgr.

Photo shows a release at a fuel facility that staff discovered during a routine inspection. Clean-up costs to owner:

- $14,711 - swale repair
- $812 - contaminated soil disposal
- $5,325 - soil testing and oil/water separator repairs

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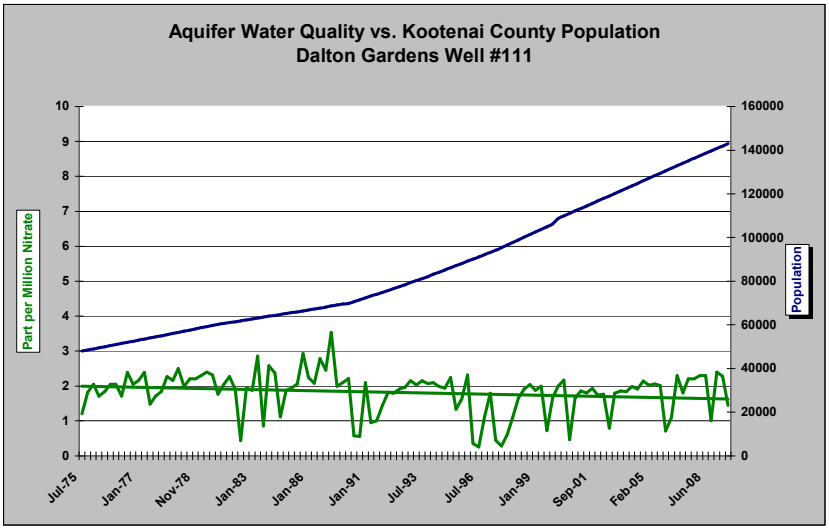
A more notable example of the value of prevention is the 2004 release of petroleum contaminated waste at BNSF. Investigation, remediation and reconstruction cost BNSF $17 million.

PHD's effective Aquifer Protection program

Panhandle Health District has collected water quality data from public and private wells for more than 35 years. Wastewater management in Idaho led to a decrease in nitrate trends in the 1980s. PHD recorded no statistical increase in other contaminants for which it tests during those 35 years. Over that time period, population in Kootenai County more than doubled, from 59,770 people to 138,000 people, most of whom live over the aquifer. Contributing to the continued health of the aquifer despite the surge in population are the efforts by PHD and partners to better manage sewage disposal, chemical storage and stormwater runoff.



A Visit to a Facility

Goal: *To provide education and technical assistance to assure that chemicals, wastewater and stormwater are managed to best protect the aquifer.*

Arrival: PHD's Environmental Health Specialist introduces himself and explains that he visits businesses that store and handle chemicals over the Rathdrum Prairie Aquifer.

He describes why the aquifer is important. He explains that it's a sand and gravel aquifer with nothing between the surface of the ground and the water table, which makes it extremely vulnerable to contamination. He explains that chemicals, wastewater and stormwater that get into the ground could end up in our sole source of drinking water.

The EH specialist reviews the chemical inventory and handling practices. He may suggest reducing quantities of chemicals, promote recycling or recommend improving storage and handling on site.

He reviews different types of wastewater streams produced on site and how they're handled from collection to disposal.

He evaluates stormwater management and determines if drywells are used correctly.

He provides informational material, such as PHD's oil/water separator pamphlet, a sheet on acceptable sludge haulers and the Aquifer Atlas.

He asks if there are any questions and provides contact information, then thanks them for their time and support for aquifer protection.

Boots on the Ground

Protecting the Rathdrum Prairie Aquifer requires people dedicated to caring for human health and the environment. Here are the people who demonstrate such a commitment every day, the people with their boots on the ground.

Rick Barlow: Aquifer Protection program coordinator

- B.S. in Watershed Sciences
- Environmental Health Specialist/Registered Sanitarian with National Environmental Health Association.
- 11 years in aquifer protection.

"It's our job to bring cumulative impact into the vision of individual business," Rick says. "We supplement that awareness with on-the-ground guidance to mitigate impacts or risk that they might not perceive or predict."

Allan Roberge: instructs businesses that store, use or manufacture critical materials on adequate containment; guides management of all non-domestic wastewater streams.

- B.S. in Biology
- Environmental Health Specialist/Registered Sanitarian with the National Environmental Health Association
- 5 years in aquifer protection

"The Aquifer Protection program is an avenue I use to help protect natural resources important to me," he says. "Protecting our drinking water source is a concept generally accepted by business owners and residents alike."

Ellen Mueller: guides non-fixed sites to safe chemical inventories and chemical handling processes.

- B.S. in Natural Resources and the environment
- 20 months in aquifer protection
- Background in stream surveys, fish population counts, timber field stand exams, National Marine Fisheries Service.

"Our aquifer is a precious resource, " Ellen says. "It is exciting to be part of a proactive program that helps prevent contamination of this vital natural resource."

Terry Trembly: instructs businesses that store, use or manufacture critical materials on adequate containment; guides management of all non-domestic wastewater streams.

- B.S. in Wastewater treatment
- Environmental Health Specialist/Registered Sanitarian with National Environmental Health Association
- 5+ years guiding safe operation of septic systems

"We're lucky to have such a great natural resource," Terry says. "It's important to me to use my education, experience and training to help others understand how to preserve and protect this special resource for all of us."

PHD = Prevention

DEQ = Remediation

What the Future Looks Like

Panhandle Health District continues to be dedicated to innovative and comprehensive aquifer protection. Efficiencies gained in core program implementation will allow expansion of the scope of PHD aquifer protection efforts beyond CMR inspections. The additional efforts include the following education, outreach and public information activities:

- Distributing the new Aquifer Atlas;
- Facilitating the re-establishment of the Stormwater Technical Advisory Committee;
- Producing semiannual newsletters highlighting issues and accomplishments;
- Working with Kootenai County Solid Waste Department to develop and distribute a Household Hazardous Waste brochure;
- Developing and regularly presenting aquifer protection information to citizen groups;
- Facilitating quarterly meetings of PHD, DEQ and APD Committee to address communication and program implementation issues;
- Enhancing participation in community meetings and forums.

All of these enhancements will be undertaken without a budget increase.